

## Sector GAP analysis – Food Processing in NER of BiH

### GAP Analysis

In business and economics, GAP analysis is a resource assessment tool enabling a company, organization or geographical area to compare its actual or *current* performance with its potential or *future* performance. Certain indicators are defined and used in order to measure the performance. On a macro level one can for example investigate the change in GDP for a certain period in time compared to another period, whilst on the micro level, considering a smaller entity for example, it is more efficient to use indicators such as change in sales or increased product status.

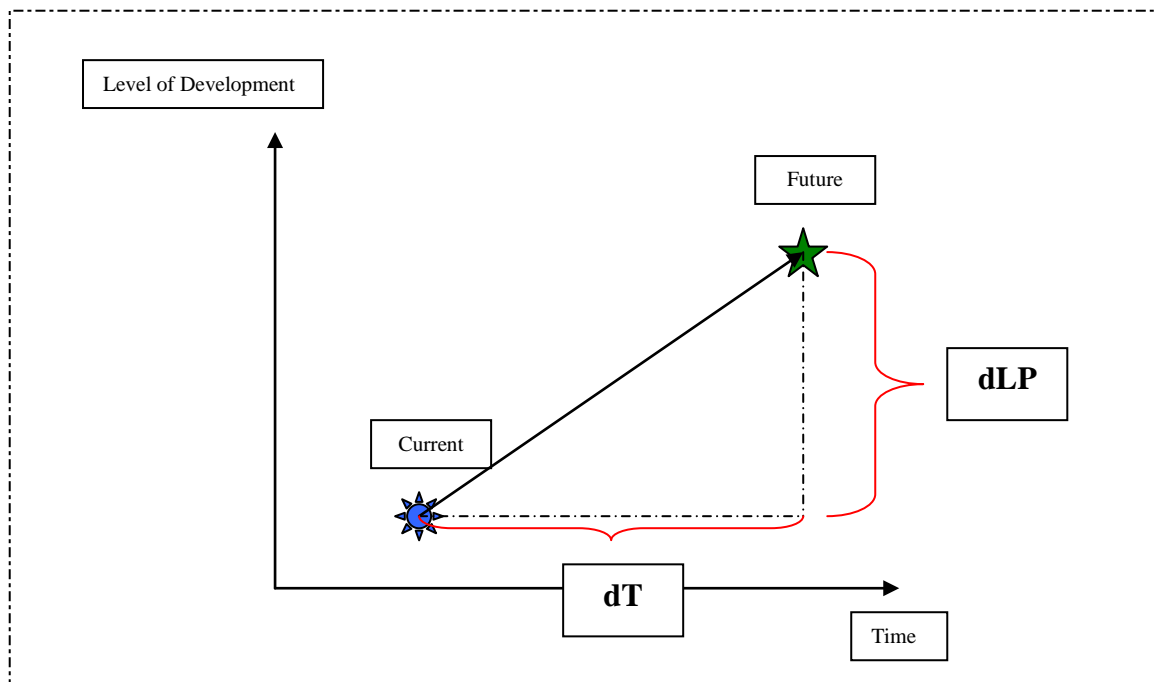
At the core of GAP analysis there are two questions:

- Where are we?
- Where do we want to be?

If a company or organization is under-utilizing resources it currently owns or is forgoing investment in capital or technology then it may be producing or performing at a level below its potential. This concept is similar to the base case of being below one's production possibilities frontier.

The GAP analysis process involves determining, documenting and approving the variance between business or other requirements and current capabilities. GAP analysis therefore naturally relates to benchmarking comparisons and other assessments. Once the general expectation of performance in the industry is understood it is possible to compare that expectation with the level of performance at which the company currently functions. The same comparison can be made based on current data on performance from a company or organization as compared to future targeted performance. This comparison becomes the GAP analysis. GAP analysis provides a foundation for measuring investment of time, money and human resources required to achieve a particular outcome.

The figure below illustrates what is stated above for any given organization, business entity or defined geographical area. The y-axis indicates the difference,  $dLP$ , in performance from a current state to a future desired state, as a function of time,  $dT$ . In other words, to achieve a future state the level of performance will increase by  $dLP$  during a period of time that is defined as  $dT$ . The diagonal line connecting Current with Future should be interpreted as the path or activity plan containing all activities to be undertaken in order to achieve the change and fill the gap.



### **GDP – Gross Domestic Product**

The gross domestic product (GDP) or gross domestic income (GDI) is one of the measures of national income and output for a given country's economy. GDP is defined as the total market value of all final goods and services produced within the country in a given period of time (usually a calendar year). It is also considered the sum of value added at every stage of production (the intermediate stages) of all final goods and services produced within a country in a given period of time, and it is given a money value.

The GDP and the *growth rate* of the GDP on an annual basis can be measured not only for whole countries but also for geographical regions. In this report we shall refer mainly to the national values for BiH as defined by the World Bank on their web portal, [www.worldbank.org](http://www.worldbank.org). The reason for the national comparison is simply that relevant and viable regional data seem difficult to extract for the specific sector of agriculture in the NE region of BiH. The total GDP in Bosnia and Herzegovina in 2006 was 12.26 billions US dollars according to the World Bank. Per capita it would be around 3 120 US dollars calculated on a population of 3, 93 million inhabitants. Annual average growth over the last 10 years was estimated 6 %.

### 3. GAPS identified

Within the CREDO project, NERDA has performed research in food – processing sector, using predefined questionnaires. Results obtained showed a great potential in the food processing in this area, particularly in the area of fresh fruits and vegetables production and processing, as well as wild fruits and mushrooms. Having in mind to define the areas of opportunities, NERDA within CREDO project established Food Board, and members are experienced managers, academic professors and representatives of authorities.

As the CREDO project identified that meat and milk processing are not of great interests in this area, because it is not possible to make some positive changes in it, and main of activities are dependent on companies from abroad.

The first meeting of Food Board was organized with aim to establish structure of the Board (president and vice president of the Board) same as to discuss way of doing into the Board.

NERDA, international and local experts took main role in organizing activities within Food Sector, and main of them are:

- Visiting 11 companies in NE B&H region and they are MENPROM D.O.O., SREBRENICA ZZ, BILJANA D.D., BOSNAPLOD D.O.O., LEDER D.O.O., SEMBERKA, A.D., AGREKS D.O.O., ECOHERB D.O.O., PMG-VIP ZZ, FANA D.O.O., VOĆA D.O.O.;
- Organizing Study Tour in Croatia,
- Preparation of Food Board meetings and discussing current situation in Food Sector in NE B&H region.

As part of activities of the Food Board, GAP analysis is performed and following GAP's are recognized:

- 1<sup>st</sup> GAP: The lack of local brands*
- 2<sup>nd</sup> GAP: Human resources and Skills improved*
- 3<sup>rd</sup> GAP: Certification*

In general current situation can be also defined through the following disadvantages: low knowledge about markets, small number of major customers, insufficient foreign language knowledge, insufficient knowledge from some specific business and skill areas, insufficient number of skill workers on market (especially some specialized professions), insufficient potential for developing of new products or for improving of existing one, most of companies are "lego" producers – loan jobs, absence of direct coordination between agricultural production and food processing companies and educational institutions, such as universities, faculties, institutes, etc.

Doing some research through visiting companies there are very successful companies, which should not be "*touched*" in sense some to giving them some knowledge, strategies etc. but most of them need some expertise in different areas.

### 3.1. The lack of local brands

In Food Sector in NER of B&H, the food production and processing is very interesting area of business activities, because since many years, in this area food has been produced. It is very important do emphasize the Semberija area which is the biggest flat in the region, and vegetables, such as potato, onion, peppers etc. have been produced there for many years. Area of NER has also mountain part, East Bosnia, area Srebrenica and Bratunac, Zvornik etc., which is suitable for berries production, sour cherry, black berry, strawberry, etc. This area has suitable climatic conditions for this kind of production.

Gradačac is a small city placed in this region, and very famous by plumb production, and its' processing drying, conserving, etc.

Great processing resources are also present here, and they are Sava from Bijeljina, Semberka from Janja, Bosnaprodukt from Gradačca, Bosnaplod and Biljana from Brčko. These companies exist over 20 years, and after the war new processing lines and capabilities are also installed, such as Vegafruit from Brijesnica, Ema from Odžak, Agrobosfood and Vinarija from Srebrenica, Fana from Srebrenik, etc.

Visiting 11 different companies and collecting data from them, international and local expert saw many disadvantages which can be summarized as follows:

- missing the strategy development focused on product,
- most of all, only three companies have branded products,
- managers do not plan budget for branding and marketing,
- variations in quality and quantity,
- big pressure from supermarkets on suppliers,
- small market share by local companies
- many different products, but none is good sold product,
- only up to 30 % of total local market of fruit and vegetables products are sold by domestic companies,

From the other hand, when the Food Board visited Croatia, among visits are Faculty of Food Technology in Osijek, Eurovoće from Orahovica, Podravka from Koprivnica, Vindija from Varaždin, members could see differences which mean that this region in Croatia is at least five years ahead in the development compared to NER of B&H.

The most important remark by Food Board is that many Croatian products are sold as local brands in supermarkets and only 20 to 30 % of foreign brands in fruit and vegetables areas are sold in supermarkets.

The managers in Croatian companies are oriented to providing more many for branding and marketing and they are concerned on end user approach, which means that is necessary to come closer to end-user product and to look for through food value chain in order to see where consumers spend the most money.

Connected to above mentioned, the Food Board together with NERDA and local expert has recognized the area of opportunities which means to improve the level of local brands.

If the value food chain is consider and in supermarket we see that are mostly foreign brands present (fruit and vegetable consideration), only up to 30 % local brands, NER of B&H has big chance in it.

According, it is necessary to make activities, which are mentioned in action plan to define the local products of interest, because it is also important to take into consideration that we have great potential in fruit and vegetables production and processing.

Activities which are predicted in Action plan include:

- identification of strategic products,
- definition of strategy for promotion of strategic products,

These two main activities and approach for creation more local brands will improve situation according number of local brands and promotion and they are proposed by Action plan.

### **3.2. Human Resources and Skills Improved**

A skilled workforce on all levels is essential for any successful company or organization. The national state authorities have normally the responsibility for a national education system – the formal system. This includes primary, secondary, high school and university levels.

Parallel to such national education systems there are non-formal programs. They appear very often within companies and organizations and are most often directed towards own personnel and newly employed trainees. Teachers could be experienced employees and/or persons from the formal educational systems.

From the information obtained from company visits and remarks from members of the study trip it is obvious that there is a need for further education of the work force in general in the food sector. Areas for improvements are, among others, food safety and hygienic conditions.

The first activity of international and local expert was to visit 10 different food-processing companies NER B&H.

Companies are chosen in wide range of development, size and turnover with the aim to present current average situation in food processing sector in NER B&H, where interviews with managers or owners were performed and some data on values, markets, educational levels of workers were collected.

According Human resources, questions were almost the same such as “we need more skilled people and specialized workers”. Answers can be viewed through two different approaches. The first is that there are many available workers at the market, even those with faculty diploma within food processing area, who do not have practical knowledge on food processing. The second approach is that the development of educational system (Secondary Technical Schools, Technical Faculties and Universities) and economy go into two different ways, because there is not common coordination. It is also important to emphasize that young people, who finish faculties, particularly Faculty of Food Processing and Agriculture production, and have knowledge of IT technologies, start work in different areas, which is good indicator of human resources. Another good indicator of necessary improvement of workers skills is that many of them secondary food processing schools, even in some cases faculty and they have never visited any company dealing with food.

In many companies, managers say that they need specialized workers who have good knowledge on their business.

If we consider current situation through above mentioned limitations we will notice: absence of skilled specialized workers, absence of certain knowledge important for employers, absence of long life learning educational institutions, absence of strategy to fulfill labor market demands for skilled workers, absence of coordination between educational institutions (Secondary Technical Schools, Technical Faculties and Universities) and food-processing companies NER B&H, etc.

In order to improve current situation in food-processing sector NER B&H connected to this GAP, Action plan - fields of interventions are developed and presented at table 1. Established action plan is oriented towards:

- defining current needs by companies

- analysis of current needs;
- defining necessary trainings which will be offered to companies and young people
- creation of virtual centre for trainings
- promotion of career and opportunities in food-processing sector;
- financial support to the educational – training programs, etc.

Successful application of proposed activities – fields of interventions will be reasonable to expect improving of current state defined by this GAP. By this way companies will have opportunity to gain educate employees or to improve their knowledge according to their own specific requirements. At the end implementation of proposed activities will enable to food-processing companies NER B&H to increase the company's ability to respond to the global market requirements and to improve their competitive abilities.

### **3.3. Certification**

As defined by the Food Law, Official Gazette of B&H, No. 50/2004. Each company included in food chain is obliged to establish the Risk analyses according to consumption of safe food. In EU countries it is also law obligation to establish some kind of risk analyses of hazards. According to Codes alimentarius, the most acceptable risk analyses of hazards all over the world are based on HACCP (Hazard Analyses and Critical Control Points) concept.

Many companies in the region are not introduced with this law obligation. Beside HACCP, for companies producing fresh fruits and vegetables, in order to sell their products at EU market, they need to establish EUREPGAP system; which means certification of Good Agricultural Practice at the farm level. The third standard, which is not obligatory for selling food products abroad is ISO 9001:2000, but this standard shows the reliability of companies and it is implemented in companies as part of integrated system, which consisted of HACCP and ISO 9001:2000.

In the region of NER B&H, small number of companies has implemented and certified above mentioned systems. For practical reasons, statistics show that only cca. 20 companies have certified HACCP, cca. 40 ISO 9001:2000 and 2 EUREPGAP. Having this in mind, it is necessary to force and support companies to change their attitudes and start process of implementation of different systems.

Certification of an operation is thus the “entrance ticket” for further business activities on many markets. For the Food Sector in NER B&H these certification systems will also be applicable. Future economic expansion – both international and domestic – must thus include certification.

Based on the gathered information gathered through company visits, it seems they are not ready top accept different certification systems, because they not, particularly managers and owners, ready to start these processes, because they do not understand that the legal framework is under constant change and especially in relation to the current alignment process with the European Union.

Organic production of food products are based on specific requirements and need special certification. As described above in this report the consumer demand for organic products is growing very fast in EU and the supply is limited. The North-East Region of Bosnia i Herzegovina seem to have excellent conditions for organic produce and it should – compared to many other growing areas - be fairly easy to adapt to and fulfill the requirements for certified organic production according to EU standards. The international organization for organic production is IFOAM (International Federation of Organic Agriculture Movements), home-page: [www.ifoam.org](http://www.ifoam.org)

NERDA, Food Board, international and local experts have recognized as the GAP for companies of non-possessing different certificates. Current situation according certification can be improved through different activities which can summarily include:

- Analyze current situation according certification
- Definitions and creation structure of different certification systems
- Financial support for companies in order to start certification process
- Creation of virtual center for different standard which will be available to all companies interested in certification process
- Evaluation of consequences after implementation of certification processes

## **4. Action plan – fields of intervention**

Those GAPs present field of interventions by which current situation of companies in food-processing sector in NER B&H can be improved to future targets. Within each GAP certain sets of indicators are defined which can be use for measurement of performance progress during the time.

In the following text some explanations of Action plan and interventions will be given, especially in the field of indicators which will be useful for measurement during the time of implementation of CREDO project II phase.

### **4.1. Preparation activities**

(1.1; 1.1.2; 1.1.3; 3.1 connected with Action plan in table)

As the first step it is necessary to carried out additional-deeper analysis of current situations in companies for strategic products. Analyses need to be carried out before organization of Round table meeting – discussion of food-processing sector NER B&H and they will be good platform for discussion.

Analyses of current situation need to include the following:

- analyses of areas of interest for strategic products,
- material and human resources for production and processing,
- quality and quantity of produced and processed products,
- analyses of equipment for production

This activity is very important and the field of interventions will be defined through the activities of Food Board, NERDA, international and local experts.

The requirements for company needs for skilled workers can be also defined as the preparation activity. This can be performed as the questionnaire and performed by NERDA and local expert.

Preparation activity should include the analyses of current situation according the certification. Analyses should include the following:

- number of certified companies,
- number those which have already started the process of certification,
- what kind of certificates are necessary to companies in order to improve their current status,
- the level of knowledge on certification processes.

To assure good basis and achievement of best results of planed activities connected with analysis of current needs and situations in food-processing sector NER B&H, NERDA in coordination with national and international experts will prepare and organize all these preparation activities.

## **4.2. Identification of strategic products and development of strategy for promotion of strategic products**

(1.1; 1.2; 1.2.1. connected with Action plan given in table)

When the base is created, i.e. the brochure with all necessary data on raw materials, processors and different products will be created. NERDA, Food Board, international and local experts will define what products will be focused on.

In order to get the best results and use democratic rules, strategic products of interest will be discussed on round tables, and criteria for companies to apply for strategic products will be set by Food Board, international and local experts.

Analyses for achievement of strategic products should include the following:

- number of products which will be promoted,
- the quality and quantity of raw materials for strategic products,
- quality and quantity of strategic products,
- possessing of any kind of certificates as “ticket entrance” for market,
- market share with similar product from abroad,

It is very important to have round tables on current position on strategic products, where Food Board, international and local experts will give their opinions on strategic products and possible actions in order to reach goal.

When strategic products are defined, strategy for their promotion will be also defined and it must include:

- number of supermarkets for promotion,
- consumer’s perception on these products,
- number of promotions and promotions via media
- variation of promotions, using model “lets buy domestic products” or “domestic products originating from NER B&H”
- what kind of promotion materials, such as brochures, leaflets will be developed,
- the development model as material for branding for other kinds of food products,
- number of presentations in region for strategic products,
- methodology for branding

The most important thing is the methodology for branding, where all parties need to participate such as supermarkets, companies, media etc.

More local brands depend mostly on supermarkets and they need to be invited to participate in this activity in order to achieve the best results.

Many food products from abroad sold in NER B&H are branded in home countries. Therefore, it is very important to force domestic companies to start with the branding and creating the structure in their budget for branding. This activity is a part of strategy for promotion of domestic fruit and vegetable products, both fresh and processed. During process of branding, it is important to emphasize the following:

- To develop the branding model in brochures in order to be available to everybody and each company,
- To present the model to companies which are chosen to promote their products?
- To give financial support to companies which to decide to invest into branding of their products,

During the second phase of CREDO project, some local brands will be developed and companies who are successful should be forced in order to try selling their products abroad, especially in regional countries.

During this activity, Food Board, NERDA and local consultant need to coordinate it, and prepare reports on achieved results within either call it campaign or promotion.

### 4.3. Creation of virtual center for trainings and certification

(2.1; 2.2; 3.1; 3.2 activates connected with Action plan in table)

As above mentioned, the non-existence of non – formal education system and skill improvement is defined as GAP. In very good preparation and defining questionnaire which need to defined at the beginning of CREDO project phase II, good results as requirements by Companies for trainings can be achieved. The requirements will include the following:

- number of specialization workers,
- number of specialized operations, processing,
- the level of knowledge,
- the level of utilization of current worker's knowledge expressed as the productivity, turnover, value per men, etc.
- organizational structure for company,
- Working instructions for machines defined by their producers, etc.

Well defined questionnaires will give good base for designing trainings and courses. The report after research companies needs will be prepared and some proposals according possible programs will be given. Proposals will be considered by Food Board, NERDA and local expert.

The program of trainings and design of some specialized courses will be offered through virtual center which means creation web page with all necessary content for specific occupations. Based on demands set by companies, the program of trainings will be developed with the designs of courses in order to satisfy all companies within food sector. Developing the brochure and web page with information courses will be very useful for companies in order to recognize their need for specialized trainings.

Beside this some presentations/trainings on specific operations in companies can be organized hiring international and local experts in order to improve workers knowledge.

In analyses of current situation with certification process in NER B&H, some improvement can be also achieved, because through certification process companies need to invest for infrastructure in order to provide good hygienic conditions. When they provide good hygienic conditions they, then can participate in food production which can be sold at EU market.

To achieve the best possible results, it is necessary to monitor situation according to certification process and develop some brochure or other material which can support companies in post-certification process.

With the aim to promote activities of established virtual centers NER B&H it is necessary to organize well planed campaign through presentations of all standards applicable in fresh and processed food production such as EuroGap, HACCP, ISO 9001:2000, ISO 22000, BRC, IFS, etc.

Goal of presentations will be:

- promotion of opportunities and potentials of food-processing sector NER B&H;
- promotions of existing funds for assistance in implementation of certifications and trainings;
- promotion of career in food-processing sector; especially if the food is produced according some international standards,
- possibilities to export food with certificates
- etc;

During these activities, it is very important to develop the catalogue with all standards and create the web page for all standards and materials which could be used in implementation of different standards.

Web page as virtual center should contain at least the following materials:

- one HACCP study developed for fresh fruits and vegetables packaging,
- one HACCP study for frozen fruits and vegetables,
- one HACCP study for some production lines which are used for branded products in the region,
- basics of procedures for ISO 9001,
- procedure of recall and Identification
- basics of ISO 22000
- Basics of ISO 14001, etc.
- basics of certification methodology,
- the translation of Codex alimentarius and laws regulating this area, such as Food Law, etc.

Companies after certification process, take some “rest”, which means that they do not pay too much attention to maintains of hygienic conditions, analyses, education, etc. as they did it before certification. It seems to be very big problem for companies when the survival audit is come up. Therefore it is very important to evaluate the consequences of implemented systems in the food sector and try to find solutions for future actions in order to have possible the best results in the implementation food safety assurance systems.